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<b>TRANSMITTAL FORM</b>  (to be used for all correspondence after initial filing)	Application Number	09/785,123
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	First Named Inventor	Jason Sodergren
	Art Unit	2141
	Examiner Name	Kristie D. Shingles
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Date	May 14, 2007	Reg. No.	32775

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**PATENT**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Application No.: 09/785,123  
Filing Date: February 16, 2001  
Appellant: Jason Sodergren  
Group Art Unit: 2141  
Examiner: Kristie D. Shingles  
Title: MULTI-PROTOCOL ADAPTER FOR IN-VEHICLE  
AND INDUSTRIAL COMMUNICATIONS  
NETWORK  
Attorney Docket: DEA-00002 (formerly DGI-103-PA)

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Mail Stop Appeal Brief – Patents  
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P.O. Box 1450  
Alexandria, VA 22313-1450

**RESPONSE TO NON-COMPLIANT APPEAL BRIEF**

This is in response to the Notice of Non-Compliant Appeal Brief mailed on April 12, 2007. This response is also being filed with a Supplemental Appeal Brief.

## REMARKS

Appellant submits and requests entry of the enclosed supplemental appeal brief which Appellant believes is in compliance with the 37 CFR 41.37.

More specifically the supplemental brief has changes to the status of the claims section which recite the claims are subject to appeal. The summary of the claimed invention section has been changed to more clearly identify the independent and dependent claims appealed. The Appellant has submitted the copies of the evidence cited in the evidence appendix as required by the office action. Entry of the enclosed supplemental brief and removal of the objections is respectfully requested.

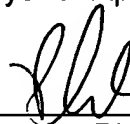
Appellant believes no fees are due for this filing. However, if any fees are required in connection with the filing of this Supplemental Brief, permission is given to charge Deposit Account Number 501612 in the name of Warn, Hoffmann, Miller & Ozga, P.C.

Respectfully submitted,

WARN, HOFFMANN, MILLER & OZGA, P.C.  
Attorneys for Appellant(s)

Dated: May 14, 2007

By: \_\_\_\_\_



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**PATENT**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Application No.: 09/785,123  
Filing Date: February 16, 2001  
Appellant: Jason Sodergren  
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INDUSTRIAL COMMUNICATIONS NETWORK  
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P.O. Box 1450  
Alexandria, VA 22313-1450

**APPELLANT'S SUPPLEMENTAL BRIEF**

This is Appellant's Supplemental Brief being filed in response to the Office Action mailed on April, 12, 2007. The supplemental Brief is being filed pursuant to Appellant's Notice of Appeal Filed on July 27, 2005. Appellant believes no fee is due for this Supplemental Brief.

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## **Table Of Authorities**

### **Authorities**

35 U.S.C. § 101.....	1, 4
35 U.S.C. § 103(a) .....	1, 4, 10
MPEP 608.01(n).....	10, 11, 14, 16
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**I. Real Party in Interest**

The real party in interest for this appeal is the Dearborn Group, Inc. of Farmington Hills, Michigan, the Assignee of this application.

**II. Related Appeals and Interferences**

There are no related appeals or interferences.

**III. Status of the Claims**

Claims 1, 4-9, and 12-16 are pending in this application and are currently subject to this appeal. Claims 2-3 and 10-11 have been cancelled. Claims 1, 4, 9, and 12-16 are provisionally rejected under 35 U.S.C. § 101 as a provisional double patenting rejection for claiming the invention as that of claims 1-20 of co-pending U.S. Publication No. 2005/0083965 (hereafter "the '965 Application"). Claims 1, 4, and 6-9 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,530,842 issued to Abraham et al. (hereafter "Abraham") in view of U.S. Patent No. 5,905,885 issued to Richter et al. (hereafter "Richter") and U.S. Patent No. 5,751,827 issued to Takahashi (hereafter "Takahashi"). Claims 12-14 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Abraham, Richter, and Takahashi in further view of U.S. Patent No. 6,539,027 issued to Cambron (hereafter "Cambron"). Claims 15 and 16 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Abraham, Richter, and Takahashi in further view of U.S. Patent No. 6,526,340 issued to Reul et al. (hereafter "Reul"). Claim 5 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Abraham, Richter, and Takahashi in further view of U.S. Patent No. 6,236,917 issued to Liebl et al. (hereafter "Liebl").

#### **IV. Status of Amendments**

All amendments have been entered.

#### **V. Summary of the Claimed Invention**

A multi-protocol adapter for communicating with one or more remote computers over any one of a plurality of protocols. **Claims 1, 4-9 and 12-16; Abstract; Figure 2 and paragraph [0004].** An integrated CPU including an embedded operating system, said operating system including software interface modules and device drivers for one or more of interrogating, monitoring, retrieving data, downloading data, recording data, revising data and performing diagnostics **(Figure 1; paragraph [0114] and claims 1, 4-9 and 12-16).** The plurality of protocols include controller area network protocols, J1850 protocols, key word protocol 2000, and UART-based protocols. **(paragraphs [0077-0091] and claims 1, 4-9 and 12-16)**

The operating system is capable of simultaneously communicating with the one or more computers running different protocols **(Figure 1; paragraph [0014] and claims 1, 4-9 and 12-16).** Additionally the operating system can be a Linux operating system. **(claim 5).**

A plurality of daughter board interface slots for accepting at least one daughter board interface modules for expanding the protocols of the multi-protocol adapter. **(paragraphs [0077-0091] and claims 1, 4-9 and 12-16).** The plurality of daughter board interfaces include SAJ1850, UBP, CCD, SCI, CAN, SAEJ1587, J1939, J2284, J2411, ISO 11992, 9141-2 and KWP2000 modules. **(paragraphs [0077-0091] and claim 16)** The CPU can have simultaneous interaction between at least one multiple device using multiple protocols. **(paragraphs [0077-0091]; Figure 1 and claim 4).**



The least one daughter board has interconnect slots and an interface for interconnection of the at least one daughterboard (**paragraphs [0053, 0077] and claim 4**); The device also includes a serial port for diagnostics and system maintenance, a flash socket for storage of system software, a slot for connection of a peripheral, a socket for connection of RAM, an interface for connection of system RAM, an interface for connection of mass-storage devices, a battery for clock and configuration memory backup, an infrared serial interface; and a piezoelectric speaker. (**paragraphs [0053-0063] and claim 4**).

The multi-protocol adapter also has a means for defining communication routines between the adapter and a client via a host device, and a means for communicating between the adapter and the client after definition of communication routines between the adapter and the client. (**paragraph [0021], figure 1 and claim 6**).

The multi-protocol adapter also further comprises a TCP/IP connection established between two software elements, the connection of serial multiplex network messages between software entities being generalized without knowledge of a specific type of multiplex network. (**paragraph [0004], figure 1 and claim 7**).

The multi-protocol adapter also further comprises a server program handling communications between a source entity and a destination entity. (**paragraph [0041], figure 1 and claim 8**).

The multi-protocol adapter also further comprises at least one of message scheduler, a message responder, a message filter or a script loader. (**paragraphs [0116-0118], figure 1 and claim 9**).

The multi-protocol adapter also further comprises an on-board web server allowing communication between users of the adapter and the adapter via a web browser technology via HTML. **(paragraph [0098], and claims 12-14).**

#### **VI. Grounds of Rejection to be Reviewed on Appeal**

Whether claims 1, 4, 9, and 12-16 should be provisionally rejected under 35 U.S.C. § 101 as a provisional double patenting rejection for claiming the same invention as claims 1-20 of the '965 Application; whether claims 1, 4, and 6-9 should be rejected under 35 U.S.C. § 103(a) as being unpatentable over Abraham in view of Richter and Takahashi; whether claims 12-14 should be rejected under 35 U.S.C. § 103(a) as being unpatentable over Abraham, Richter, and Takahashi in further view of Cambron; whether claims 15-16 should be rejected under 35 U.S.C. § 103(a) as being unpatentable over Abraham, Richter, and Takahashi in further view of Reul; and whether claim 5 should be rejected under 35 U.S.C. § 103(a) as being unpatentable over Abraham, Richter, and Takahashi in further view of Liebl.

#### **VII. Argument**

##### **A. Claims 1, 4, 9, and 12-16 Do Not Provisionally Claim the Same Invention as U.S. Publication No. 2005/0083965**

##### **1. Statutory Double Patenting**

In determining whether the statutory basis for a double patenting rejection exists, it must be determined that the same invention is being claimed twice, where "same invention" means identical subject matter. MPEP 804(II)(A). A double patenting rejection can be provisionally made between co-pending applications where the issue of double patenting would occur if one of the applications issue as a patent. MPEP

804(I)(C). A reliable test for determining if there is double patenting under §101 is whether the claim in the application could be literally infringed without literally infringing a corresponding claim in the co-pending application or patent. MPEP 804(II)(A).

## **2. Independent Claim 1**

Independent Claim 1 sets forth an imbedded operating system and daughter-board interface slots for accepting at least one daughter-board interface module for expanding the protocol of the multi-protocol adapter. See claim 1. By contrast, claims 1, 11, and 18 of the '965 Application does not require an embedded operating system and requires at least one daughter-board interface module mounted in the plurality of daughter-board slots. See claims 1, 11, and 18 of the '965 Application. Therefore, a multi-protocol adapter having an embedded operating system and only having the daughter-board interface slots without the daughter-board interface module along with the other limitations of claim 1, would literally infringe claim 1 of the present application without literally infringing claims 1, 11, and 18 of the '965 Application. Likewise, a protocol adapter not having an embedded operating system and including at least one daughter-board interface module mounted in the plurality of daughter-board slots along with the other limitations of claims 1, 11, and 18 of the '965 Application would literally infringe the '965 Application without literally infringing the invention of claim 1 in the present application. Thus Appellant respectfully requests reversal of the provisional statutory double patenting rejection as to claim 1.

### **3. Dependent Claims 9 and 12-16**

Dependent claims 9 and 12-16 are directly or ultimately dependent upon independent claim 1, and therefore, include all the limitations of claim 1. Likewise, dependent claims 6, 9-10, 17 and 20 of the '965 Application are dependent upon independent claim 1 of the '965 Application, and therefore, include all of the limitations thereof. As set forth above, one could literally infringe claim 1 of the present application and not literally infringe claim 1 of the '965 Application. Additionally, one could literally infringe claim 1 of the '965 Application and not literally infringe claim 1 of the present application. Therefore, Appellant respectfully submits that dependent claims 9 and 12-16 do not claim the same invention as set forth in claims 6, 9-10, 17 and 20 of the '965 Application, and Appellant respectfully requests the provisional statutory double patenting rejection as to dependent claims 9 and 12-16 be reversed.

### **4. Independent Claim 4**

Independent claim 4 sets forth an embedded operating system, an interface for connection of the system random access memory (RAM), and a battery for clock and configuration memory back-up. See claim 4. Claims 8, 16, and 19 of the '965 Application are dependent upon independent claims 1, 11, and 18, respectively, and therefore include all the limitations thereof. Claims 8, 16, and 19 of the '965 Application require level shifting buffers and an ATA interface for providing an attachment point for mass storage devices and programmable logic block. See claims 8, 16, and 19 of the '965 Application. Appellant respectfully maintains that claim 4 does not claim the same invention as claims 8, 16, and 19 of the '965 Application. A multi-protocol adapter can

include an embedded operating system, an interface for connection of system RAM, and a battery for clock and configuration memory back-up along with the other limitations set forth in claim 4 of the present application and literally infringe claim 4 without literally infringing claims 8, 16, and 19 of the '965 Application. Likewise, a protocol adapter can include, among other limitations, level shifting buffers and an ATA interface for providing an attachment point for mass storage devices and programmable logic block and literally infringe the '965 Application without literally infringing claim 4 of the present application. Therefore, Appellant respectfully submits that claim 4 does not claim the same invention as set forth in claims 8, 16, and 19 of the '965 Application, and respectfully requests reversal of the provisional statutory double patenting rejection as to claim 4.

**B. Claims 1, 4, and 6-9 Are Not Obvious in View of the Combination of Abraham, Richter, and Takahashi**

**1. *Prima Fascia* obviousness**

MPEP 2143 states that in order to establish a *prima fascia* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine the reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art references must teach or suggest all of the claim limitations. Appellant respectfully submits that a *prima fascia* case of obviousness has not been established because there is no suggestion or motivation in the references to combine the reference

teachings and the references do not teach or suggest all the claimed limitations, as will be described below.

## **2. Independent Claims 1 and 4**

Claims 1 and 4 set forth an integrated CPU including an embedded operating system which has software interfaced modules and device drivers for one or more of interrogating, monitoring, retrieving data, downloading data, recording data, revising data, and performing diagnostics over any one of the plurality of protocols. See claims 1 and 4. Appellant respectfully maintains that Abraham, Richter, and Takahashi do not teach, suggest, or motivate one having ordinary skill in the art to combine the references or teach all the limitations as set forth in claims 1 and 4.

Abraham teaches a local area network with generic channel architecture which can be logically or dynamically changed (Abstract). Richter teaches a peripheral interface system and apparatus which is used to interface peripherals for sub-systems having different formats with a CPU system bus (Abstract). Takahashi teaches a piezoelectric speaker (Abstract). Abraham, Richter, and Takahashi do not teach, suggest, or motivate one having ordinary skill in the art to combine the local area network of Abraham with the peripheral interface system of Richter and the piezoelectric speaker of Takahashi to form a multi-protocol adapter for communicating with one or more remote computers over any one of a plurality of protocols as set forth in claims 1 and 4.

The Examiner states in the Office Action that Abraham teaches an integrated CPU having an embedded operating system, where the operating system includes

software interfaced modules and device drivers for one or more of interrogating, monitoring, retrieving data, downloading data, recording data, revising data, and performing diagnostics over any one of the plurality of protocols, wherein the operating system is capable of simultaneously communicating with one or more computers running different protocols (col. 3, lines 10-18 and col. 9, line 5 - col. 10, line 2). The CPU having simultaneous interaction between at least one multiple device using multiple protocols (Figure 2, col. 3, lines 10-18, and col. 9, line 5 - col. 10, line 2). Abraham further teaches that the modules are cards which provide a connection between a specific type of medium and that the concentrator or adapter includes modules using various known media such as unshielded twisted pair wire or cable, fiber optic cable, and coaxial cable (col. 9, lines 13-19). Thus, each network that uses a different protocol uses a different medium to connect to the concentrator (col. 9, lines 20-42).

By contrast, claims 1 and 4 set forth an integrated CPU with an embedded operating system including software interface modules and device drivers which, *inter alia*, determines the protocol that is being used between the remote computers. Further, when the concentrator of Abraham receives data from a channel in a particular protocol, the concentrator either converts one protocol to another on a generic backbone or receives the transmissions from one port and selectively transmits to another port (col. 10, lines 23-26). Therefore, the concentrator of Abraham does not interrogate, monitor, record, revise, or perform diagnostics over any one of a plurality of protocols as set forth in claims 1 and 4. Thus, Appellant respectfully maintains that Abraham, Richter, and Takahashi do not teach, suggest, or motivate one having

ordinary skill in the art the limitations of claims 1 and 4, and respectfully requests reversal of the rejection of claims 1 and 4.

In further regard to claim 4, claim 4 sets forth the CPU having simultaneous interaction between at least one multiple device using multiple protocols. The concentrator of Abraham communicates with multiple CPUs that each can operate in different protocols, but the CPUs only transmit or receive a single protocol with the concentrator which is based upon the media that connects the CPU to the concentrator. Therefore, Appellant respectfully submits that Abraham, Richter, and Takahashi do not teach, suggest, or motivate one having ordinary skill in the art a CPU having simultaneous interaction between at least one multiple device using multiple protocols, and respectfully requests reversal of the §103(a) rejection.

### **3. Dependent claims 6-9**

Dependent claims include all the limitations of the claims with which they depend from. MPEP 608.01(n). Dependent claims 6-9 are dependent upon independent claim 1, and therefore, include all the limitations of claim 1. As set forth above, the Examiner in the Office Action stated that Abraham taught an integrated CPU having an embedded operating system where the operating system includes software interface modules and device drivers for one or more of interrogating, monitoring, retrieving data, downloading data, recording data, revising data, and performing diagnostics over any one of the plurality of protocols, and the operating system is capable of simultaneously communicating with one or more computers running different protocols (col. 3, lines 10-18 and col. 9, line 5 - col. 10, line 2). Abraham further teaches that the modules are



cards which provide a connection between the specific type of medium and that the concentrator or adapter include modules using various known medias such as unshielded twisted pair cable or wire, fiber optic cable, and coaxial cable (col. 9, lines 14-19).

Abraham differs in that Abraham includes an integrated CPU with an embedded operating system including software interfaced modules and device drivers which, *inter alia*, determine the protocol that is being used by the remote computers. Further, when the concentrator of Abraham receives data from a channel in a particular protocol, the concentrator either converts one protocol to another on a generic backbone or receives the transmission from one port and selectively transmits to another port (col. 10, lines 23-26). Therefore, the concentrator of Abraham does not interrogate, monitor, record, revise, or perform diagnostics over any one of the plurality of protocols as set forth in claim 1. Thus, Appellant respectfully maintains that Abraham, Richter, and Takahashi do not teach, suggest, or motivate one having ordinary skill in the art the limitations of claim 1, which are included in dependent claims 6-9, and Appellant respectfully requests reversal of the rejection to dependent claims 6-9.

**C. Claims 12-14 Are Not Obvious in View of the Combination of Abraham, Richter, and Takahashi in Further View of Cambron**

Dependent claims include all the limitations of the claims with which they depend from. MPEP 608.01(n). Dependent claims 12-14 are directly or ultimately dependent upon independent claim 1, and therefore, include all the limitations of claim 1. Claim 1 sets forth an integrated CPU including an embedded operating system which has software interface modules and device drivers for one or more of interrogating,

monitoring, retrieving data, downloading data, recording data, revising data, and performing diagnostics over any one of the plurality of protocols. Appellant respectfully maintains that Abraham, Richter, and Takahashi in further view of Cambron do not teach, suggest, or motivate one having ordinary skill in the art to combine the references or teach all the limitations as set forth in claims 12-14.

Abraham teaches a local area network with generic channel architecture which can be logically or dynamically changed (Abstract). Richter teaches a peripheral interface system and apparatus which is used to interface peripherals for sub-systems having different formats with a CPU system bus (Abstract). Takahashi teaches a piezoelectric speaker (Abstract). Cambron teaches a modular, reconfigurable, intelligent signal multiplexer for telecommunication purposes (Abstract). Abraham, Richter, and Takahashi in further view of Cambron do not teach, suggest, or motivate one having ordinary skill in the art to combine the local area network of Abraham, the peripheral interface system of Richter, the piezoelectric speaker of Takahashi with the multiplexer for telecommunication purposes of Cambron to form a multi-protocol adapter for communicating with one or more remote computers over any one of a plurality of protocols as set forth in claims 12-14.

The Examiner states in the Office Action that Abraham teaches an integrated CPU having an embedded operating system, where the operating system includes software interface modules and device drivers for one or more of interrogating, monitoring, retrieving data, downloading data, recording data, revising data, and performing diagnostics over any one of the plurality of protocols, wherein the operating system is capable of simultaneously communicating with one or more computers

running different protocols (col. 3, lines 10-18 and col. 9, line 5 - col. 10, line 2). Abraham further teaches that the modules are cards which provide a connection between a specific type of medium and that the concentrator or adapter includes modules using various known media such as unshielded twisted pair wire or cable, fiber optic cable, and coaxial cable (col. 9, lines 13-19). Thus, each network that uses a different protocol uses a different medium to connect to the concentrator (col. 9, lines 20-42).

By contrast, claim 1 sets forth an integrated CPU with an embedded operating system including software interfaced modules and device drivers which, *inter alia*, determine the protocol that is being used between the remote computers. Further, when the concentrator of Abraham receives data from a channel in a particular protocol, the concentrator either converts one protocol to another on a generic backbone or receives the transmission from one port and selectively transmits to another port (col. 10, lines 23-26). Therefore, the concentrator of Abraham does not interrogate, monitor, record, revise, or perform diagnostics over any one of a plurality of protocols as set forth in claim 1. Thus, Appellant respectfully maintains that Abraham, Richter, Takahashi in further view of Cambron do not teach, suggest, or motivate one having ordinary skill in the art the limitations of claim 1, which are included in dependent claims 12-14, and Appellant respectfully requests reversal of the rejection as to dependent claims 12-14.

Further, the Examiner in the Office Action states that claims 13 and 14 are rejected as being obvious in view of Cambron which teaches a multi-protocol adapter having communication between users of the adapter and the adapter via web browser technology (col. 7, lines 15-23). Cambron further teaches a multiplexer for

telecommunications where the web server (37) acts as an inner gateway by implementing the HTTP protocol and a SNMP Agent which is connected through the telecommunication lines. Appellant respectfully maintains that Cambron does not teach, suggest, or motivate one having ordinary skill in the art for the user of the multiplexer to communicate with the multiplexer or adapter via web browser technology, as set forth in claims 13-14. Instead, Cambron teaches a multiplexer that translates one telecommunication to another which includes an HTTP protocol and web server (37), such that the telecommunication is received by the multiplexer and is transmitted in a different form of telecommunication and one of the telecommunications is an HTTP protocol via a web server. Therefore, Appellant respectfully maintains that Cambron does not teach, suggest or motivate one having ordinary skill in the art communication between the user of the multiplexer and the multiplexer using an HTTP protocol, and respectfully requests reversal of the rejection of dependent claims 13 and 14.

**D. Claims 15 and 16 Are Not Obvious in View of the Combination of Abraham, Richter, Takahashi and in Further View of Reul**

Dependent claims include all the limitations of the claims with which they depend from. MPEP 608.01(n). Dependent claims 15 and 16 are dependent upon independent claim 1, and therefore, include all the limitations of claim 1. Claim 1 sets forth an integrated CPU including an embedded operating system which has software interface modules and device drivers for one or more of interrogating, monitoring, retrieving data, downloading data, recording data, revising data, and performing diagnostics over any one of the plurality of protocols. See claim 1. Appellant respectfully maintains that Abraham, Richter, and Takahashi in further view of Reul do not teach, suggest, or

motivate one having ordinary skill in the art to combine the references or teach all the limitations as set forth in claims 15 and 16.

Abraham teaches a local area network with generic channel architecture which can be logically or dynamically changed (Abstract). Richter teaches a peripheral interface system and apparatus which is used to interface peripherals for sub-systems having different formats with a CPU system bus (Abstract). Takahashi teaches a piezoelectric speaker (Abstract). Reul teaches a diagnostics tool that communicates with a plurality of motor vehicle control units (Abstract). Abraham, Richter, and Takahashi in further view of Reul do not teach, suggest, or motivate one having ordinary skill in the art to combine the local area network of Abraham, the peripheral interface system of Richter, the piezoelectric speaker of Takahashi with the diagnostics tool of Reul to form a multi-protocol adapter for communicating with one or more remote computers over any one of a plurality of protocols as set forth in claims 15 and 16.

The Examiner states in the Office Action that Abraham teaches an integrated CPU having an embedded operating system, where the operating system includes software interfaced modules and device drivers for one or more of interrogating, monitoring, retrieving data, downloading data, recording data, revising data, and performing diagnostics over any one of the plurality of protocols, wherein the operating system is capable of simultaneously communicating with one or more computers running different protocols (col. 3, lines 10-18 and col. 9, line 5 - col. 10, line 2). Abraham further discloses that the modules are cards which provide a connection between a specific type of medium and that the concentrator or adapter includes modules using various known media such as unshielded twisted pair cable or wire, fiber

optic cable, and coaxial cable (col. 9, lines 13-19). Thus, each network that uses a different protocol uses a different medium to connect to the concentrator (col. 9, lines 20-42).

By contrast, claim 1 sets forth an integrated CPU with an embedded operating system including software interface modules and device drivers which, *inter alia*, determines the protocol that is being used between the remote computers. Further, when the concentrator of Abraham receives data from a channel in a particular protocol, the concentrator either converts one protocol to another on a generic backbone or receives the transmissions from one port and selectively transmits to another port (col. 10, lines 23-26). Therefore, the concentrator of Abraham does not interrogate, monitor, record, revise, or perform diagnostics over any one of a plurality of protocols as set forth in claim 1. Thus, Appellant respectfully maintains that Abraham, Richter, and Takahashi in further view of Reul do not teach, suggest, or motivate one having ordinary skill in the art the limitations of claim 1, which are included in dependent claims 15 and 16, and respectfully requests reversal of the rejection as to claims 15 and 16.

**E. Claim 5 is Not Obvious in View of the Combination of Abraham, Richter, and Takahashi in Further View of Liebl**

Dependent claims include all the limitations in the claims with which they depend from. MPEP 608.01(n). Dependent claim 5 is dependent upon independent claim 1 and therefore includes all the limitations of claim 1. Claim 1 sets forth an integrated CPU including an embedded operating system which has software interfaced modules and device drivers for one or more of interrogating, monitoring, retrieving data, downloading data, recording data, revising data, and performing diagnostics over any

one of the plurality of protocols. See claim 1. Appellant respectfully maintains that Abraham, Richter, and Takahashi in further view of Liebl, do not teach, suggest, or motivate one having ordinary skill in the art to combine the references or teach all the limitations as set forth in claim 5.

Abraham teaches a local area network with generic channel architecture which can be logically or dynamically changed (Abstract). Richter teaches a peripheral interface system and apparatus which is used to interface peripherals for sub-systems having different formats with a CPU system bus (Abstract). Takahashi teaches a piezoelectric speaker (Abstract). Liebl teaches a diagnostic tool for communicating with a plurality of motor vehicle control units (Abstract). Abraham, Richter, and Takahashi in further view of Liebl do not teach, suggest, or motivate one having ordinary skill in the art to combine the local area network of Abraham, the peripheral interface system of Richter, the piezoelectric speaker of Takahashi with the diagnostics tool of Liebl to form a multi-protocol adapter for communicating with one or more remote computers over any one of the plurality of protocols as set forth in claim 5.

The Examiner states in the Office Action that Abraham teaches an integrated CPU having an embedded operating system, where the operating system includes software interfaced modules and device drivers for one or more of interrogating, monitoring, retrieving data, downloading data, recording data, revising data, and performing diagnostics over any one of the plurality of protocols, wherein the operating system is capable of simultaneously communicating with one or more computers running different protocols (col. 3, lines 10-18, and col. 9, line 5 - col. 10, line 2). Abraham further discloses that the modules are cards which provide a connection

between a specific type of medium and that the concentrator or adapter includes modules using various known media such as unshielded twisted pair cable or wire, fiber optic cable, and coaxial cable (col. 9, lines 13-19). Thus, each network that uses a different protocol uses a different medium to connect to the concentrator (col. 9, lines 20-42).

By contrast, claim 1 sets forth an integrated CPU with an embedded operating system including software interface modules and device drivers which, *inter alia*, determines the protocol that is being used between the remote computers. Further, when the concentrator of Abraham receives data from a channel in a particular protocol, the concentrator either converts one protocol to another on a generic backbone or receives the transmissions from one port and selectively transmits to another port (col. 10, lines 23-26). Therefore, the concentrator of Abraham does not interrogate, monitor, record, revise, or perform diagnostics over any one of a plurality of protocols as set forth in claim 1. Thus, Appellant respectfully maintains that Abraham, Richter, and Takahashi in further view of Liebl do not teach, suggest, or motivate one having ordinary skill in the art the limitations of claim 1, which are included in dependent claim 5, and respectfully requests reversal of the rejection as to dependent claim 5.

Further, dependent claim 5 sets forth a Linux operating system. By contrast, Liebl sets forth a Lynx operating system (col. 3, lines 29-34). Although Linux and Lynx are both real time operating systems, and Lynx has recently become compatible with Linux, Linux and Lynx are different operating systems. Appellant respectfully maintains that Liebl does not teach, suggest, or motivate one having ordinary skill in the art a



multi-protocol adapter using a Linux operating system, and respectfully requests reversal of the rejection as to claim 5.

### VIII CONCLUSION

Appellant respectfully submits that claims 1, 4, and 6-9 are not obvious in view of Abraham, Richter, and Takahashi; claims 12-14 are not obvious in view of Abraham, Richter, and Takahashi in further view of Cambron; claims 15 and 16 are not obvious in view of Abraham, Richter, and Takahashi in further view of Reul; and claim 5 is not obvious in view of Abraham, Richter, and Takahashi in further view of Liebl. It is therefore respectfully requested that the rejections under 35 U.S.C. § 103 be reversed, and that Appellant's claims be allowed.

Appellant believes no fees are due for this Supplemental Brief. However, if any fees are required in connection with the filing of this Supplemental Brief, permission is given to charge Deposit Account Number 501612 in the name of Warn, Hoffmann, Miller & LaLone, P.C.

Respectfully submitted,

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CLAIMS APPENDIX

**COPY OF CLAIMS INVOLVED IN THE APPEAL**

1. A multi-protocol adapter for communicating with one or more remote computers over any one of a plurality of protocols, the adapter comprising:

an integrated CPU including an embedded operating system, said operating system including software interface modules and device drivers for one or more of interrogating, monitoring, retrieving data, downloading data, recording data, revising data and performing diagnostics over any one of the plurality of protocols, wherein the operating system is capable of simultaneously communicating with the one or more computers running different protocols; and

a plurality of daughter board interface slots for accepting at least one daughter board interface modules for expanding the protocols of the multi-protocol adapter.

4. A multi-protocol adapter for communicating with one or more remote computers over any one of a plurality of protocols, the adapter comprising:

an integrated CPU having an embedded operating system, said operating system including software interface modules and device drivers for one or more of interrogating, monitoring, retrieving data, downloading data, recording data, revising data and performing diagnostics over any one of the plurality of protocols, wherein the operating is capable of simultaneously communicating with the one or more computers running different protocols;

the CPU having simultaneous interaction between at least one multiple device using multiple protocols;

at least one daughter board having interconnect slots;

an interface for interconnection of the at least one daughterboard;

a serial port for diagnostics and system maintenance;

a flash socket for storage of system software;

a slot for connection of a peripheral;

a socket for connection of RAM;

an interface for connection of system RAM;

an interface for connection of mass-storage devices;

a battery for clock and configuration memory backup;

an infrared serial interface; and

a piezoelectric speaker.

5. The multi-protocol adapter according to claim 1 wherein the embedded operating system comprises Linux operating system.

6. The multi-protocol adapter according to claim 1, the adapter further comprising:

means for defining communication routines between the adapter and a client via a host device, and

means for communicating between the adapter and the client after definition of communication routines between the adapter and the client.

7. The multi-protocol adapter according to claim 1, the adapter further comprising:

a TCP/IP connection established between two software elements, the connection of serial multiplex network messages between software entities being generalized without knowledge of a specific type of multiplex network.

8. The multi-protocol adapter according to claim 1 further comprising:

a server program handling communications between a source entity and a destination entity.

9. The multi-protocol adapter according to claim 1 further comprising:

at least one of message scheduler, a message responder, a message filter or a script loader.

12. The multi-protocol adapter according to claim 1 further comprising:

an on-board web server.

13. The multi-protocol adapter according to claim 12 further comprising:

communication between users of the adapter and the adapter via a web browser technology.

14. The multi-protocol adapter according to claim 13 further comprising communication between users of the adapter and the adapter via a web browser via HTML.

15. The multi-protocol adapter according to claim 1 wherein the plurality of protocols are selected from the group consisting of controller area network protocols, J1850 protocols, key word protocol 2000, and UART-based protocols.

16. The multi-protocol adapter according to claim 1 wherein the daughter board interface modules are selected from the group consisting of SAJ1850, UBP, CCD, SCI, CAN, SAEJ1587, J1939, J2284, J2411, ISO 11992, 9141-2 and KWP2000 modules.

EVIDENCE APPENDIX

U.S. Patent Application No. 2005/0083965 was relied upon by the Examiner in the Office Action mailed on July 17, 2006.

U.S. Patent No. 5,530,842 issued to Abraham et al. was relied upon by the Examiner in the Office Action mailed on July 17, 2006.

U.S. Patent No. 5,905,885 issued to Richter et al. was relied upon by the Examiner in the Office Action mailed on July 17, 2006.

U.S. Patent No. 5,751,827 issued to Takahashi was relied upon by the Examiner in the Office Action mailed on July 17, 2006.

U.S. Patent No. 6,539,027 issued to Cambron was relied upon by the Examiner in the Office Action mailed on July 17, 2006.

U.S. Patent No. 6,526,340 issued to Reul et al. was relied upon by the Examiner in the Office Action mailed on July 17, 2006.

U.S. Patent No. 6,236,917 issued to Liebl et al. was relied upon by the Examiner in the Office Action mailed on July 17, 2006.

RELATED PROCEEDINGS APPENDIX

NONE